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(FILE 'HOME' ENTERED AT 11:59:34 ON 04 DEC 2002)

FILE 'REGISTRY' ENTERED AT 12:05:09 ON 04 DEC 2002

L1 1 S 9076-63-5/RN

FILE 'CAOLD, CAPLUS, CASREACT, CROPU, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATDPA, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 12:05:23 ON 04 DEC 2002

FILE 'REGISTRY' ENTERED AT 12:05:31 ON 04 DEC 2002

SET SMARTSELECT ON

L2 SEL L1 1- CHEM : 4 TERMS

SET SMARTSELECT OFF

FILE 'CAOLD, CAPLUS, CASREACT, CROPU, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATDPA, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 12:05:32 ON 04 DEC 2002

L3 9 S L2

L4 9 DUP REM L3 (0 DUPLICATES REMOVED)

L5 3 S L3 (L) (DNA OR CDNA OR NUCLEOTIDE OR POLYNUCLEOTIDE OR NUCLE

=> d ibib ab 1-3

L5 ` ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:117169 CAPLUS

DOCUMENT NUMBER: 132:162810

TITLE: Cloning of genes for L-lysine-2-oxoglutarate  
6-aminotransferase and piperidine-6-carboxylate  
dehydrogenase from Flavobacterium lutescens and use of  
the genes for production of L-homoglutamic acid

INVENTOR(S): Fujii, Tadashi; Narita, Takao; Nakata, Kuniho;  
Agematu, Hitosi; Tsunekawa, Hiroshi; Isshiki, Kunio;  
Yoshioka, Takeo

PATENT ASSIGNEE(S): Mercian Corp., Japan

SOURCE: PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008170	A1	20000217	WO 1999-JP4197	19990804
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2337981	AA	20000217	CA 1999-2337981	19990804
AU 9950642	A1	20000228	AU 1999-50642	19990804
EP 1103612	A1	20010530	EP 1999-935047	19990804
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.:

JP 1998-232382	A	19980805
JP 1999-182362	A	19990628
WO 1999-J9	990419W	19990804
WO 1999-JP4197	W	19990804

AB The genes encoding L-lysine-2-oxoglutarate 6-aminotransferase (LAT) and  
piperidine-6-carboxylate (P6C) dehydrogenase are isolated from  
Flavobacterium lutescens strain IFO 3084 and used for the transformation  
of F. lutescens to increase the yield of L-homoglutamic acid. LAT and P6C  
dehydrogenase are comprised of 491 and 510 amino acids, resp.  
Transformation of F. lutescens with the gene for LAT or P6C dehydrogenase  
increased the yield of L-homoglutamic acid by 1.5-2 folds.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3 PCTFULL COPYRIGHT 2002 Univentio

ACCESSION NUMBER: 2001092523 PCTFULL ED 20020826

TITLE (ENGLISH): NOVEL HUMAN POLYNUCLEOTIDES AND POLYPEPTIDES ENCODED  
THEREBY

TITLE (FRENCH): NOUVEAUX POLYNUCLEOTIDES HUMAINS ET POLYPEPTIDES CODES  
PAR CEUX-CI

INVENTOR(S): SHIMKETS, Richard, A.; LEACH, Martin, D.

PATENT ASSIGNEE(S): CURAGEN CORPORATION; SHIMKETS, Richard, A.; LEACH,  
Martin, D.

DOCUMENT TYPE: Patent

PATENT INFORMATION:

NUMBER	KIND	DATE
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WO 2001092523	A2	20011206
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DESIGNATED STATES

AE	AG	AL	AM	AT	AU	AZ	BA	BB	BG	BR	BY	BZ	CA	CH	CN	CO	CR
CU	CZ	DE	DK	DM	DZ	EE	ES	FI	GB	GD	GE	GH	GM	HR	HU	ID	IL
IN	IS	JP	KE	KG	KP	KR	KZ	LC	LK	LR	LS	LT	LU	LV	MA	MD	MG
MK	MN	MW	MX	MZ	NO	NZ	PL	PT	RO	RU	SD	SE	SG	SI	SK	SL	TJ

TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ  
SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ  
CF CG CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2001-US10836 A 20010529  
PRIORITY INFO.: US 2000-60/206,132 20000530  
US 2000-60/228,716 20000829

ABEN The present invention provides ORFX, a novel isolated polypeptide, as well as a polynucleotide encoding ORFX and antibodies that immunospecifically bind to ORFX or any derivative, variant, mutant, or fragment of the ORFX polypeptide, polynucleotide or antibody. The invention additionally provides methods in which the ORFX polypeptide, polynucleotide and antibody are used in detection and treatment of a broad range of pathological states, as well as to other uses.

ABFR La presente invention concerne le polypeptide ORFX, nouveau polypeptide isole, ainsi qu'un polynucleotide codant pour le polypeptide ORFX et des anticorps qui se fixent de facon immunospecifique a ORFX ou a n'importe quel derive, variant, mutant ou fragment de ce polypeptide ORFX, de ce polynucleotide ou de cet anticorps. Cette invention concerne aussi des techniques dans lesquelles le polypeptide ORFX, le polynucleotide et l'anticorps sont utilises pour detecter et traiter un grand nombre d'etats pathologiques, ainsi que d'autres utilisations.

L5 ANSWER 3 OF 3 USPATFULL

ACCESSION NUMBER: 2002:235434 USPATFULL  
TITLE: Biosensors, reagents and diagnostic applications of directed evolution  
INVENTOR(S): Minshull, Jeremy, Menlo Park, CA, UNITED STATES  
Davis, S. Christopher, San Francisco, CA, UNITED STATES  
Welch, Mark, Fremont, CA, UNITED STATES  
Raillard, Sun Ai, Mountain View, CA, UNITED STATES  
Vogel, Kurt, Palo Alto, CA, UNITED STATES  
Krebber, Claus, Mountain View, CA, UNITED STATES  
PATENT ASSIGNEE(S): Maxygen, Inc., Redwood City, CA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002127623	A1	20020912
APPLICATION INFO.:	US 2001-920607	A1	20010731 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-222056P	20000731 (60)
	US 2000-244764P	20001031 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	LAW OFFICES OF JONATHAN ALAN QUINE, P O BOX 458, ALAMEDA, CA, 94501	
NUMBER OF CLAIMS:	130	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
LINE COUNT:	6877	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for sensing test stimuli using arrays of biopolymers are provided. Libraries of biopolymers, such nucleic acid variants, and expression products encoded by nucleic acid variants are provided. Reusable library arrays, and methods for their use are provided.

=> d 14 ibib ab 1-9

L4 ` ANSWER 1 OF 9 USPATFULL

ACCESSION NUMBER: 2002:235434 USPATFULL  
TITLE: Biosensors, reagents and diagnostic applications of directed evolution  
INVENTOR(S): Minshull, Jeremy, Menlo Park, CA, UNITED STATES  
Davis, S. Christopher, San Francisco, CA, UNITED STATES  
Welch, Mark, Fremont, CA, UNITED STATES  
Raillard, Sun Ai, Mountain View, CA, UNITED STATES  
Vogel, Kurt, Palo Alto, CA, UNITED STATES  
Krebber, Claus, Mountain View, CA, UNITED STATES  
PATENT ASSIGNEE(S): Maxygen, Inc., Redwood City, CA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002127623	A1	20020912
APPLICATION INFO.:	US 2001-920607	A1	20010731 (9)

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PRIORITY INFORMATION:	US 2000-222056P	20000731 (60)
	US 2000-244764P	20001031 (60)
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LEGAL REPRESENTATIVE:	LAW OFFICES OF JONATHAN ALAN QUINE, P O BOX 458, ALAMEDA, CA, 94501	
NUMBER OF CLAIMS:	130	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
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L4 ANSWER 2 OF 9 PCTFULL COPYRIGHT 2002 Univentio  
ACCESSION NUMBER: 2001092523 PCTFULL ED 20020826  
TITLE (ENGLISH): NOVEL HUMAN POLYNUCLEOTIDES AND POLYPEPTIDES ENCODED THEREBY  
TITLE (FRENCH): NOUVEAUX POLYNUCLEOTIDES HUMAINS ET POLYPEPTIDES CODES PAR CEUX-CI  
INVENTOR(S): SHIMKETS, Richard, A.; LEACH, Martin, D.  
PATENT ASSIGNEE(S): CURAGEN CORPORATION; SHIMKETS, Richard, A.; LEACH, Martin, D.  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

	NUMBER	KIND	DATE
DESIGNATED STATES	WO 2001092523	A2	20011206
	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG		
APPLICATION INFO.:	WO 2001-US10836	A	20010529
PRIORITY INFO.:	US 2000-60/206,132		20000530
	US 2000-60/228,716		20000829

ABEN The present invention provides ORFX, a novel isolated polypeptide, as well as a polynucleotide encoding ORFX and antibodies that immunospecifically bind to ORFX or any derivative, variant, mutant, or fragment of the ORFX polypeptide, polynucleotide or antibody. The invention additionally provides methods in which the ORFX polypeptide, polynucleotide and antibody are used in detection and treatment of a broad range of pathological states, as well as to other uses.

ABFR La presente invention concerne le polypeptide ORFX, nouveau polypeptide isole, ainsi qu'un polynucleotide codant pour le polypeptide ORFX et des anticorps qui se fixent de facon immunospecifique a ORFX ou a n'importe quel derive, variant, mutant ou fragment de ce polypeptide ORFX, de ce polynucleotide ou de cet anticorps. Cette invention concerne aussi des techniques dans lesquelles le polypeptide ORFX, le polynucleotide et l'anticorps sont utilises pour detecter et traiter un grand nombre d'etats pathologiques, ainsi que d'autres utilisations.

L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:117169 CAPLUS  
DOCUMENT NUMBER: 132:162810  
TITLE: Cloning of genes for L-lysine-2-oxoglutarate 6-aminotransferase and piperidine-6-carboxylate dehydrogenase from Flavobacterium lutescens and use of the genes for production of L-homoglutamic acid  
INVENTOR(S): Fujii, Tadashi; Narita, Takao; Nakata, Kuniho; Agematu, Hitosi; Tsunekawa, Hiroshi; Isshiki, Kunio; Yoshioka, Takeo  
PATENT ASSIGNEE(S): Mercian Corp., Japan  
SOURCE: PCT Int. Appl., 62 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008170	A1	20000217	WO 1999-JP4197	19990804
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2337981	AA	20000217	CA 1999-2337981	19990804
AU 9950642	A1	20000228	AU 1999-50642	19990804
EP 1103612	A1	20010530	EP 1999-935047	19990804
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: JP 1998-232382 A 19980805  
JP 1999-182362 A 19990628  
WO 1999-J9 990419W 19990804  
WO 1999-JP4197 W 19990804

AB The genes encoding L-lysine-2-oxoglutarate 6-aminotransferase (LAT) and piperidine-6-carboxylate (P6C) dehydrogenase are isolated from Flavobacterium lutescens strain IFO 3084 and used for the transformation of F. lutescens to increase the yield of L-homoglutamic acid. LAT and P6C dehydrogenase are comprised of 491 and 510 amino acids, resp. Transformation of F. lutescens with the gene for LAT or P6C dehydrogenase increased the yield of L-homoglutamic acid by 1.5-2 folds.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1980:195215 CAPLUS  
DOCUMENT NUMBER: 92:195215  
TITLE: Enzyme of pipecolate metabolism. Studies on the question of regional piperidine synthesis in the mouse brain  
AUTHOR(S): Garweg, G.; Von Rehren, D.; Hintze, U.  
CORPORATE SOURCE: Anat. Inst., Univ. Hamburg, Hamburg, Fed. Rep. Ger.  
SOURCE: Verhandlungen der Anatomischen Gesellschaft (1979), Volume Date 1978, 73(2), 1051-2

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The distribution of .DELTA.1-pyrrolin-2-carboxylate reductase, L-pipecolate dehydrogenase, and .DELTA.1-piperideine-6-carboxylate dehydrogenase activities in various regions of mouse brain was detd. A marked activity difference, with the max. conversion rate occurring in the prosencephalon and a lack of activity in cerebellum and medulla spinalis, was obsd. only for pyrrolin-2-carboxylate reductase. The expression of region-specific biogenesis of pipecolic acid in mouse brain was in between that previously reported for dog and monkey. In contrast to them, the distribution of pipecolate dehydrogenase and piperideine-6-carboxylate dehydrogenase in mouse brain showed an extensive, equal distribution in all areas of the brain.

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1972:55563 CAPLUS

DOCUMENT NUMBER: 76:55563

TITLE: Pipecolic acid

AUTHOR(S): Rodwell, Victor W.

CORPORATE SOURCE: Dep. Biochem., Purdue Univ., Lafayette, Indiana, USA

SOURCE: Methods Enzymol. (1971), Volume 17, Issue Pt. B, 174-88. Editor(s): Colowick, S. P. Academic: New York, N. Y.

CODEN: 18HWA8

DOCUMENT TYPE: Conference

LANGUAGE: English

AB Improved methods are given for synthesis of DL-pipecolic acid (I), with 2 methods for the resolution of I into D- and L-forms. In a new procedure, L-pipecolic acid (II) is obtained from fresh green beans (*Phaseolus vulgaris*). Phys. and chem. properties of I and II are given. Spectra are given (300-650 m.mu.) for the adducts of various imino acids with ninhydrin. When paper chromatograms are sprayed with ninhydrin in EtOH or acetone, the initial color with I is purple, like amino acids. On standing (particularly if collidine is present) the color changes to yellow-brown. If Cd acetate is added to the ninhydrin reagent, .alpha.-amino acids give red colors. The I color remains royal purple, providing a spot test for I. The purification and assay of II-dehydrogenase from *Pseudomonas putida* P2 (ATCC 25.571) are described. Properties of the enzyme are described.

L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1967:112374 CAPLUS

DOCUMENT NUMBER: 66:112374

TITLE: Studies on the electron transport particle of *Pseudomonas* P2 and purification of pipecolic acid dehydrogenase

AUTHOR(S): Baginsky, Marietta L.

CORPORATE SOURCE: Univ. of California, San Francisco, CA, USA

SOURCE: (1967) 170 pp. Avail.: 65-4894  
From: Diss. Abstr. B 1967, 27(7), 2268

DOCUMENT TYPE: Dissertation

LANGUAGE: English

AB Unavailable

L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1967:513926 CAPLUS

DOCUMENT NUMBER: 67:113926

TITLE: Metabolism of pipecolic acid in a *Pseudomonas* species.  
V. Pipecolate oxidase and dehydrogenase

AUTHOR(S): Baginsky, Marietta L.; Rodwell, Victor W.

CORPORATE SOURCE: Sch. of Med., Univ. of California, San Francisco, CA, USA

SOURCE: J. Bacteriol. (1967), 94(4), 1034-9

CODEN: JOBAAY

DOCUMENT TYPE: Journal

LANGUAGE: English

AB cf. CA 65: 7493h. Oxidn. of pipecolate to .DELTA.1-piperideine-6-carboxylate is catalyzed by pipecolate oxidase, an inducible,

membrane-bound dehydrogenase assocd. with the electron transport components of P. putida P2. From the oxidase a smaller particle contg. FAD and cytochrome b was obtained, but it was not able to catalyze electron transfer to O or to cytochrome c. Certain properties of the **L-pipecolate dehydrogenase** (I) and FAD-flavoprotein, are reported. Neither O nor mammalian cytochrome c served as electron acceptors for pipecolate oxidn. by I. The apparent Km for L-pipecolate was 1.7 times. 10<sup>-2</sup>M. 17 references.

L4 ANSWER 8 OF 9 DGENE (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: AAY80510 Protein DGENE

TITLE: L-homoglutamic acid production gene, isolated from Flavobacterium lutescens is used for production of transformants with enhanced conversion of lysine to L-homoglutamic acid. -

INVENTOR: Fujii T; Narita T; Nakata K; Agematu H; Tsunekawa H; Isshiki K; Yoshioka T

PATENT ASSIGNEE: (SAOC)MERCIAN CORP.

PATENT INFO: WO 2000008170 A1 20000217 62p

APPLICATION INFO: WO 1999-JP4197 19990804

PRIORITY INFO: JP 1998-232382 19980805

JP 1999-182362 19990628

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

OTHER SOURCE: 2000-195579 [17]

AB This is the sequence of the **piperidine-6-carboxylate dehydrogenase** protein from Flavobacterium lutescens which is involved in the production of L-homoglutamic acid from L-lysine. The corresponding gene is capable of restoring L-homoglutamic acid production in mutants of F. lutescens lacking this ability. L-homoglutamic acid is used as a synthetic intermediate for drug synthesis including methotrexate.

L4 ANSWER 9 OF 9 DGENE (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: AAZ91051 DNA DGENE

TITLE: L-homoglutamic acid production gene, isolated from Flavobacterium lutescens is used for production of transformants with enhanced conversion of lysine to L-homoglutamic acid. -

INVENTOR: Fujii T; Narita T; Nakata K; Agematu H; Tsunekawa H; Isshiki K; Yoshioka T

PATENT ASSIGNEE: (SAOC)MERCIAN CORP.

PATENT INFO: WO 2000008170 A1 20000217 62p

APPLICATION INFO: WO 1999-JP4197 19990804

PRIORITY INFO: JP 1998-232382 19980805

JP 1999-182362 19990628

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

OTHER SOURCE: 2000-195579 [17]

AB This sequence represents the gene encoding the Flavobacterium lutescens **piperidine-6-carboxylate dehydrogenase** gene which is involved in the production of L-homoglutamic acid from L-lysine. The gene is capable of restoring L-homoglutamic acid production in mutants of F. lutescens lacking this ability. L-homoglutamic acid is used as a synthetic intermediate for drug synthesis including methotrexate.